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(54) Title: A PURIFIED POLYPEPTIDE, ISOLATED NUCLEIC ACIDS ENCODING SAID POLYPEPTIDE, VECTORS AND
USE THEREOF

(57) Abstract: The present invention relates to a purified polypeptide, which is capable of mediating infection of a cell, by use of the polytropic/xenotropic receptor encoded by the Rmc1 locus from a NIH Swiss inbred NFS/N mouse for entry, and unable of mediating infection of a cell by use of a human polytropic/xenotropic receptor encoded by the human RMC1 locus. The present invention especially relates to an envelope protein from the Murine Leukaemia Virus (MLV) strain SL3-2, which is capable of infecting murine cells through use of the polytropic receptor encoded by the Rmc1 locus, but lacks the ability of infecting human cells expressing the corresponding xenotropic receptor encoded by the RMC1 locus. The present invention furthermore demonstrate that replacements of at least one specified amino acid in the polypeptide can alter the tropism and enable the SL3-2 envelope to infect a human cell by use of the human polytropic/xenotropic receptor encoded by the RMC1 locus for entry.

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